

WHAT IS CLAIMED IS:

1        1.        An image processing method, performed by an image output device  
2        connected to an image supply device storing image data, via a communication  
3        path through which the image data is communicated, the method comprising  
4        steps of:

5                receiving, from the image supply device, a control information item  
6        including a script for image processing with respect to the image data, the  
7        script being described by a markup language; and

8                performing the image processing with respect to the image data  
9        based on the control information item.

1        2.        The image processing method as set forth in claim 1, wherein the  
2        image output device is a printer, and the image supply device is a digital  
3        camera.

1        3.        The image processing method as set forth in claim 1, wherein the  
2        markup language enables additional definition of a document form.

1        4.        The image processing method as set forth in claim 3, wherein the  
2        markup language is one of a standard generalized markup language (SGML),  
3        an extensible markup language (XML), and a language having a hierarchical  
4        compatibility with the SGML or the XML.

1        5.        The image processing method as set forth in claim 1, wherein the  
2        script includes a control command for the image processing, a response for the  
3        control command, and a notification of a status of the image output device,  
4        which are described by the markup language.

1        6.        The image processing method as set forth in claim 1, wherein the  
2        control information item does not contain the image data therein.

1        7.        The image processing method as set forth in claim 1, further  
2        comprising a step of generating a control signal for controlling an image output  
3        mechanism, based on the control information item and the image data.

1        8.        The image processing method as set forth in claim 1, further  
2        comprising a step of providing a parser, which analyzes a syntax of the markup  
3        language to interpret a tag of the markup language which is related to the  
4        image processing.

1        9.        An image processing method, performed by an image output device  
2        connected to an image supply device storing image data, via a communication  
3        path, the method comprising steps of:

4                storing templates each associated with at least one control  
5        information item;

6                communicating, with the image supply device, a control information  
7        item including a script for image processing, which is described by a markup  
8        language and generated from one of the templates based on the control

9 information item;  
10 receiving image data stored in the image supply device, based on the  
11 script; and  
12 performing the image processing with respect to the image data,  
13 based on the script.

1 10. An information processing method, performed by an image supply  
2 device connected to an image output device via a communication path, the  
3 method comprising steps of:

4 receiving, from the image output device, a status information item  
5 indicating a status of the image output device; and

6 generating a control information item including a script for image  
7 processing performed by the image output device, which is described by a  
8 markup language.

1 11. An information processing method, performed by an image supply  
2 device connected to an image output device via a communication path, the  
3 method comprising steps of:

4 communicating, with the image output device, a control information  
5 item including a script for image processing, which is described by a markup  
6 language; and

7 providing a parser, which analyzes a syntax of the markup language  
8 to interpret a tag of the markup language which is related to the image  
9 processing.

1     12.     An image processing method, performed by an image supply device  
2     connected to an image supply output via a communication path, the method  
3     comprising steps of:

4             storing templates each associated with at least one control  
5     information item; and

6             communicating, with the image output device, a control information  
7     item including a script for image processing, which is described by a markup  
8     language and generated from one of the templates based on the control  
9     information item.

1     13.     An image processing method, performed by an image supply device  
2     connected to an image supply output via a communication path through which  
3     the image data is communicated, the method comprising steps of:

4             storing a job specification file for specifying an image processing job  
5     and the image data;

6             generating, based on the job specification file, a script including a  
7     command for initiating the image processing job, the script being described by  
8     a markup language; and

9             transmitting the script to the image output device.

1     14.     An image processing method performed by an image supply device  
2     storing image data and an image output device performing image processing  
3     with respect to the image data, which are connected via a communication path  
4     through which the image data is communicated, the method comprising steps  
5     of:

6           communicating, between the image supply device and the image  
7   output device, a control information item including a script for the image  
8   processing, which is described by a markup language;  
9           transmitting the image data to the image output device, based on the  
10   script; and  
11           performing the image processing, at the image output device, with  
12   respect to the image data.

1   15.     The image processing method as set forth in claim 14, wherein the  
2   image output device controls a flow of the image processing.

1   16.     The image processing method as set forth in claim 15, further  
2   comprising a step of transmitting, from the image supply device to the image  
3   output device, a job start command as the script, in a case where a  
4   predetermined actuation on a control panel of the image supply device is  
5   detected,  
6           wherein the image output device performs the image processing in  
7   response to the job start command.

1   17.     The image processing method as set forth in claim 16, further  
2   comprising steps of:  
3           generating, at the image output device, a transmission request for  
4   image data designated by the job start command; and  
5           transmitting the transmission request to the image supply device,  
6           wherein the image supply device transmits the image data in

7 response to the transmission request.

1 18. The image processing method as set forth in claim 14, wherein the  
2 image supply device controls a flow of the image processing.

1 19. The image processing method as set forth in claim 18, further  
2 comprising a step of transmitting, from the image output device to the image  
3 supply device, a job start command as the script, in a case where a  
4 predetermined actuation on a control panel of the image output device is  
5 detected,

6 wherein the image supply device transmits the image data in  
7 response to the job start command.

1 20. An image processing method performed by an image supply device  
2 storing image data and an image output device performing image processing  
3 with respect to the image data, which are connected via a communication path  
4 through which the image data is communicated, the method comprising steps  
5 of:

6 storing, in the image supply device, a job specification file for  
7 specifying at least one image processing job and;

8 transmitting the job specification file to the image output device;

9 generating, at the image output device, a control information item  
10 described by a markup language, based on the job specification file; and

11 transmitting the control information item to the image supply device.

1       21.       The information processing method as set forth in claim 20, wherein:  
2               the image supply device specifies one of the image data and the job  
3       specification file, by a script including a job start command described by the  
4       markup language;  
5               the image output device determines which one of the image data and  
6       the job specification file is specified by the job start command;  
7               the image output device acquires the image data from the image  
8       supply device, in a case where the image output device determines that the job  
9       start command specifies the image data; and  
10              the image output device first acquires the job specification file from  
11       the image supply device, in a case where the image output device determines  
12       that the job start command specifies the job specification file, and then  
13       acquires the image data specified by the job specification file, from the image  
14       supply device.

1       22.       The image processing method as set forth in claim 20, wherein the  
2       job specification file includes at least one processing condition information item  
3       each associated with one of the at least one image processing job.

1       23.       The image processing method as set forth in claim 20, wherein the  
2       job specification file is stored by a digital print order format (DPOF) standard.

1       24.       An image processing method performed by an image supply device  
2       storing image data and an image output device performing image processing  
3       with respect to the image data, which are connected via a communication path

4 through which the image data is communicated, the method comprising steps  
5 of:

6 transmitting, from the image output device to the image supply device,  
7 a status information item pertaining to an operation status of the image output  
8 device, at least a part of which is described by a markup language; and

9 generating, at the image supply device, a control information item  
10 pertaining to a resuming operation of the image output device, at least a part of  
11 which is described by a markup language.

1 25. The image processing method as set forth in claim 24, wherein the  
2 status information item includes a resumption information item which specifies  
3 a printed object which is allocated at a predetermined position in a page layout,  
4 and the method further comprises steps of:

5 storing the resumption information item in the image supply device;

6 transmitting, as the control information item, a first script including a  
7 job start command for resuming a print operation at the image output device,  
8 and a second script specifying one image data to be first printed when the print  
9 operation is resumed, based on the resumption information item, in a case  
10 where the state information item indicates that the print operation is halted; and

11 resuming the print operation from the printed object, in accordance  
12 with the first script and the second script.

1 26. The image processing method as set forth in claim 25, wherein the  
2 resumption information item is transmitted only in a case where the print  
3 operation is halted.



1     27.     The image processing method as set forth in claim 25, wherein the  
2     resumption information item is transmitted every time a page break is  
3     conducted during the print operation.

1     28.     The image processing method as set forth in claim 25, wherein the  
2     resumption information item includes at least one of a path information item  
3     indicating where the one image data is stored in the image supply device and a  
4     number information item indicating how many times the printed object is to be  
5     supplied to the image output device repetitively.

1     29.     The image processing method as set forth in claim 28, wherein the  
2     number information item is corrected so as to indicate a remained number of  
3     the repetitive supply of the one image data before the one image data is  
4     supplied to the image output device, in a case where a page break is  
5     conducted during the supply of the one image data.

1     30.     The image processing method as set forth in claim 25, further  
2     comprising steps of:

3             detecting, at the image output device, a first condition for halting the  
4     print operation;

5             transmitting, as the status information item, a third script indicating  
6     that the first condition is detected;

7             halting the print operation after the third script is transmitted;

8             detecting, at the image output device, a second condition for

9       resuming the print operation; and  
10               transmitting, as the status information item, a fourth script indicating  
11       that the second condition is detected.

1       31.       An image processing system, comprising:  
2               an image supply device, operable to store image data; and  
3               an image output device, connected to the image supply device via a  
4       communication path through which the image data is communicated, and  
5       operable to perform image processing with respect to the image data,  
6               wherein each of the image supply device and the image output device  
7       has a communication controller operable to communicate a control information  
8       item including a script for the image processing which is described by a  
9       markup language.

1       32.       An image output device, comprising:  
2               a communicator, connected to an image supply device storing image  
3       data via a communication path through which the image data is  
4       communicated;  
5               a communication controller, operable to communicate, with the image  
6       supply device, a control information item including a script for image  
7       processing, which is described by a markup language; and  
8               a processor, operable to perform the image processing to output an  
9       image based on the image data and the control information item.

1     33.     An image supply device, comprising:  
2             a storage, which stores image data;  
3             a communicator, connected to an image output device performing  
4     image processing with respect to the image data via a communication path  
5     through which the image data is communicated; and  
6             a communication controller, operable to communicate, with the image  
7     output device, a control information item including a script for the image  
8     processing which is described by a markup language.

1     34.     A computer program product comprising a computer program which  
2     causes a computer to serve as the communication controller in the image  
3     output device as set forth in claim 32.

1     35.     A computer program product comprising a computer program which  
2     causes a computer to serve as the communication controller in the image  
3     supply device as set forth in claim 33.